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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/616,956	07/14/2000	Pankaj K. Jha	0325.00371	6699
21363	7590	07/13/2005	EXAMINER	
CHRISTOPHER P. MAIORANA, P.C.			NGUYEN, TOAN D	
24840 HARPER			ART UNIT	PAPER NUMBER
ST. CLAIR SHORES, MI 48080			2665	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/616,956

Applicant(s)

JHA, PANKAJ K.

Examiner

Toan D. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,9-14,16,18-20 and 23-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1,3-6,9-14,16,18-20 and 23-26 is/are rejected.
- 7) ☒ Claim(s) 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/18/05, 2/28/05</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3-6, 9, 14, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Connor (US 6,356,544) in view of Vogel (US 6,075,788) further in view of Sethuram et al (US 6,765,928).

For claim 1, O'Connor discloses SONET add/drop multiplexer with packet over SONET capability comprising:

an interface (figure 2, reference 101) connectable to a network (col. 3 lines 61-63); and

a node (figure 2, reference 101) configured (i) as an add/drop device for said network (col. 3 line 63), (iii) to drop at least one of said packet from said frame (figure 2, col. 1 lines 7-10).

O'Connor does not disclose (ii) to transport a plurality of packets having a plurality of protocols within a frame an said network through said interface, and (iv) to add a header to each of said packets, wherein said frame comprises (a) a packet envelope to hold said packets and (b) a label having information specifying that at least two of said protocols are used in said packet envelope. In an analogous art, Vogel discloses (ii) transport a plurality of packets having a plurality of protocols (PPP protocol

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and ATM cell protocol) within a frame an said network through said interface (col. 6 lines 26-36) and (iv) to add a header to each of said packet (col. 6 lines 27-30 and col. 8 lines 39-42), wherein said frame comprises (a) a packet envelope to hold said packets (col. 6 lines 25-34) and (b) at least two of said protocols are used in said packet envelope (col. 6 lines 25-34).

One skilled in the art would have recognized a plurality of packets having a plurality of protocols within a frame an said network through said interface to use the teachings of Vogel in the system of O'Connor. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the plurality of packets having a plurality of protocols within a frame an said network through said interface as taught by Vogel in O'Connor's system with the motivation being to provide a single-chip device that enables data to be transmitted over a SONET communications link in a variety of standard and non-standard transmission modes (col. 3 line 67 to col. 4 line 3).

However, O'Connor in view of Vogel does not disclose a label having information specifying said packet envelope. In an analogous art, Sethuram et al disclose a label having information specifying said packet envelope (col. 12 lines 40-41).

One skilled in the art would have recognized a label having information specifying said packet envelope to use the teachings of Sethuram et al in the system of O'Connor. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the Label having information specifying said packet envelope as taught by Sethuram et al in O'Connor's system with the motivation being to

provide a SPE POH processor stage 518 can be extracted data for multiple services and written into elastic storage means 404 over a storage port 414 (col. 12 lines 40-43).

For claim 3, O'Connor discloses wherein said node comprises SONST/SDH add/drop multiplexers (ADMs) (figure 2, col. 3 line 63).

For claim 4, O'Connor discloses wherein said frame is further configured to optimize a bandwidth of said apparatus (col. 2 lines 27-29).

For claim 5, O'Connor discloses wherein said network comprises a fiber optic network (figure 2, col. 3 line 61).

For claim 6, O'Connor discloses wherein said network comprises a SONST/SDH fiber optic network (figure 2, col. 3 line 61).

For claim 9, O'Connor discloses wherein said packets are selected from a group consisting of (i) Internet Protocol packets, (ii) Packet-Over-SONST/SDH (POS), (iii) Point-toPoint Protocol packets, (iv) Asynchronous Transfer Mode cells, (v) 6.702-based Plesiochronous Digital Hierarchy packets, and Frame Relay packets (figure 2, col. 1 lines 4-5 and col. 4 lines 42-45).

For claim 14, O'Connor discloses wherein said node is selected from the group of (i) terminal multiplexers and (ii) SONST/SDH ADMs and (iii) data-aware SONST/SDH ADMs and (iv) digital cross-connects (DCCs) (figure 2, references 101, 104, 106, 107 and 108, col. 3 lines 62-63).

For claim 16, O'Connor discloses SONST add/drop multiplexer with packet over SONST capability comprising the steps of,

(A) adding at least one new packet (Abstract lines 1-8 and col. 1 lines 4-10);

(B) dropping at least one of said packets in said frame (Abstract lines 1-8 and col. 1 lines 4-10); and

(C) a data type of a payload in each of said packets from a header added to each of said packets (col. 6 lines 25-34 and col. 8 lines 39-42).

O'Connor does not disclose having one of said protocols to said packets in said frame. In an analogous art, Vogel discloses having one of said protocols (PPP protocol and ATM cell protocol) to said packets in said frame (col. 6 lines 26-36).

One skilled in the art would have recognized one of said protocols to said packets in said frame to use the teachings of Vogel in the System of O'Connor. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the one of said protocols to said packets in said frame as taught by Vogel in O'Connor's system with the motivation being to provide a single-chip device that enables data to be transmitted over a SONET communications link in a variety of standard and non-standard transmission modes (col. 3 line 67 to col. 4 line 3).

However, O'Connor in view of Vogel does not disclose (C) identifying a data type of a payload. In an analogous art, Sethuram et al disclose (C) identifying a data type of a payload (col. 12 lines 40-41).

One skilled in the art would have recognized identifying a data type of a payload to use the teachings of Sethuram et al in the System of O'Connor. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the identifying a data type of a payload as taught by Sethuram et al in O'Connor's system with the motivation being to provide a SPE POH processor stage 518 can be

extracted data for multiple services and written into elastic storage means 404 over a storage port 414 (col. 12 lines 40-43).

For claim 18, O'Connor discloses wherein said packets are selected from a group consisting of (i) Internet Protocol packets, (ii) Packet-Over-SONET/SDH (POS), (iii) Point-to-Point Protocol packets, (IV) Asynchronous Transfer Mode cells, (v) 6.702-based Plesiochronous Digital hierarchy packets, and Frame Relay packets (figure 2, col. 1 lines 4-5 and col. 4 lines 42-45).

3. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Connor (US 6,356,544) in view of Vogel (US 6,075,788) and Sethuram et al (US 6,765,928) further in view of Lahat et al (US 6,233,074).

For claim 10, Vogel in view of O'Connor and Sethuram et al disclose wherein said network is selected from a group consisting of a point-to-point networks (col. 1 line 48). However, Vogel in view of O'Connor and Sethuram et al does not disclose non-SONET/SDH configurations such as point-to-point WDM networks. In an analogous art, Lahat et al. disclose non-SONET/SDH configurations such as point-to-point WDM networks (col. 5 line 58).

One skilled in the art would have recognized non-SONET/SDH configurations such as point-to-point WDM networks to use the teachings of Lahat et al. in the system of O'Connor. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the non-SONET/SDH configurations such as point-to-point WDM networks as taught by Lahat et al. in O'Connor's system with the motivation being to include the savings in terms of both material costs and installation

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labor expenses and very high bandwidths can be achieved in the ring network by using a plurality of wavelengths (col. 11 lines 38-44).

4. Claims 11-13 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Connor (US 6,356,544 B1) in view of Vogel (US 6,075,788) and Sethuram et al (US 6,765,928) further in view of Larsen (US 4,237,553).

For claims 11-13 and 19-20, O'Connor in view of Vogel and Sethuram et al does not disclose wherein said node is further configured to determine said reusability of each of said packets within said frame received at said interface. In an analogous art, Larsen discloses wherein said node is further configured to determine said reusability of each of said packets within said frame received at said interface (col. 5 lines 54-58).

Larsen discloses further wherein said node is further configured to determine said reusability of each of said packets in response to a reuse bit (col. 5 lines 54-58 as set forth in claim 12); wherein each of said header is configured to store said reuse bit (col. 5 lines 46-58 as set forth in claim 13); determining a reusability of each of said packets (col. 5 lines 54-58 as set forth in claim 19); wherein said determining is further in response to a reuse bit in a header in each of said packets (col. 2 lines 55-60 and col. 5 lines 54-58 as set forth in claim 20).

One skilled in the art would have recognized a reusability of each of said packets within said frame received at said interface to use the teachings of Larsen in the system of O'Connor. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the reusability of each of said packets within said frame received at said interface as taught by Larsen in O'Connor's system with the motivation

being to provide that each packet header may thus be monitored at frame speed (col. 3 lines 6-8).

5. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Connor (US 6,356,544) in view of Vogel (US 6,075,788).

For claims 23 and 25, O'Connor discloses SONET add/drop multiplexer with packet over SONET capability comprising:

a plurality of nodes configured to interface to a network (figure 2, references 101, 104, 106, 107 and 108, col. 3 lines 62-63). However, O'Connor does not expressly disclose wherein each of said nodes is configured to generate a frame on said network comprising a plurality of packets having a plurality of different protocol received through a plurality of interfaces. In an analogous art, Vogel discloses wherein each of said nodes is configured to generate a frame on said network comprising a plurality of packets having a plurality of different protocol received through a plurality of interfaces (col. 6 lines 26-36). Vogel discloses further wherein said network comprises one of a Synchronous Optical Network frame and a Synchronous Digital Hierarchy fiber optic network (col. 3 lines 3-5 as set forth in claim 25).

One skilled in the art would have recognized each of said nodes is configured to generate a frame on said network comprising a plurality of packets having a plurality of different protocol received through a plurality of interfaces to use the teachings of Vogel in the system of O'Connor. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the each of said nodes is configured to generate a frame on said network comprising a plurality of packets having a plurality of

different protocol received through a plurality of interfaces as taught by Vogel in O'Connor's system with the motivation being to provide a single-chip device that enables data to be transitted over a SONET communication link in a variety of standard and non-standard transmission modes (col. 3 line 67 to col. 4 line 3).

For claim 24, O'Connor discloses wherein said nodes are further configured as add/drop multiplexers for said network (figure 2, references 101-108, col. 3 line 63).

6. Claims 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over O'Connor (US 6,356,544) in view of Vogel (US 6,075,788) further in view of Chen et al (US 6,377,645).

For claim 26, O'Connor in view of Vogel do not disclose wherein each of said nodes is further configured to frame each of said packet received through said interface using a modified Simple Data Link protocol framing. In an analogous art, Chen et al disclose wherein each of said nodes is further configured to frame each of said packet received through said interface using a modified Simple Data Link protocol framing (col. 8 lines 43-44). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the each of said nodes is further configured to frame each of said packet received through said interface using a modified Simple Data Link protocol framing as taught by Chen et al in O'Conner's system with the motivation being used for data transmission (col. 8 lines 39-42).

Allowable Subject Matter

7. Claim 27 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed on 02/23/05 have been fully considered but they are not persuasive.

The applicant argues with respect to claim 1, that O'Conner, Vogel and Sethuram, each appear to be silent regarding a node adding a header to each of plurality of packets in a frame as presently claimed. The examiner disagrees. Applicant's attention is directed to Vogel patent at col. 6 lines 27-30 where Vogel clearly teaches "A remote ATM Adaption Layer receives a PPP frame, segments the PPP frame into the payload fields of a plurality of ATM cells, and generates the cell headers." Vogel further teaches at col. 8 lines 39-42 "ATM SAR circuit 52 segments the data unit into 48 octet-sized pieces that fit into the ATM cell payload fields and generates a header field for each ATM cell."

The applicant argues that O'Conner, Vogel and Sethuram, alone or in combination, do not appear to teach or suggest a frame comprising a label having information specifying that at least two of a plurality of protocol are used in a packet envelope as presently claimed. The examiner disagrees. Sethuram teaches at col. 12 lines 40-41 "the payload using the STS Path Signal Label (C2) so that the data for the multiple services can be extracted and written into the elastic storage means". According the application specification on page 12, the PSL may provide information

specifying that at least two of a plurality of protocols are used in a packet envelope as claimed. Furthermore, Vogel teaches at col. 9 lines 55-57 "Transporting PPP frames in ATM cells over SONET consists of adding the PPP flag sequences, control fields, etc., to the PDU as well as performing byte stuffing." (a label having information specifying that at least two of a plurality of protocol are used in a packet envelope means).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Sethuram teaches the SPE POH processes the payload using the STS Path Signal Label and is used to support O'Conner and Vogel references. The motivation to combine these three references is that the PSL may provide information specifying that at least two of a plurality of protocols are used in a packet envelope (see Specification on page 12).

The applicant argues with respect to claim 16, that Sethuram appear to be silent regarding data types of payloads and header added to packet. The examiner disagrees. Sethuram teaches the STS Path Signal Label to identify data types of payloads as discussed in claim 1. Furthermore, Vogel teaches a payload in each of said packets from a header added to each of said packet at col. 6 lines 27-30 and col. 8 lines lines 39-42 (see the response in claim 1).

The applicant argues with respect to claim 10, that modifying the SONET network of O'Conner with Lahat such that the non-sending and non-receiving nodes of O'Conner are unaware of SONET frames on separate specific wavelengths appears to change the principle operation of the SONET of O'Conner.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Lahat teaches WDM is utilized to construct a ring type network (Abstract lines 2-4) and is used to support O'Conner reference.

The Applicant argues with respect to claims 11, 13, 19 and 20, that how Larson allegedly teaches how to determine a reusability of a first packet (e.g., PPP) embedded inside a second packet (e.g., ATM). The examiner disagrees. At col. 5 lines 46-58, where Larsen clearly teaches "The control station permanently stores a bit sequence for the header portion of a packet." Larsen teaches further "The control station also monitors these two bit positions. If both positions contain '1' bits, indicating that the packet has been occupied by data and then read out, the control station overwrites '0' into these two positions to permit the reuse of the packets." (determine a reusability of each of said packets within said frame received at said interface means).

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

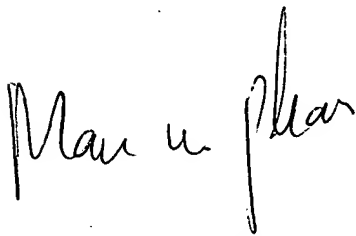
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D. Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**MAN U. PHAN
PRIMARY EXAMINER**